KRASKIN, LESSE & COSSON, LLP
ATTORNEYS AT LAW
TELECOMMUNICATIONS MANAGEMENT CONSULTANTS

2120 L Street, N.W., Suite 520
Washington, D.C. 20037

Telephone (202) 296-8890
Telecopier (202) 296-8893

Submitted via ECFS

September 25, 20002

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Western Wireless Corporation Petition for Designation as An Eligible Telecommunications Carrier on the Crow Reservation, CC Docket 96-45, DA 99-1847

Ex Parte

Dear Ms. Dortch:

By letter of June 20, 2002, counsel for Western Wireless requested that the Commission resume consideration of its petition for eligible telecommunications carrier ("ETC") designation on the Crow Reservation. Counsel enclosed a letter from then tribal chairman Clifford Bird-in-Ground supporting its position.[1] Project Telephone Company provides the following comments to update the record in this proceeding. Specifically, Project provides further legal analysis of the Commission's jurisdiction in light of its decision granting ETC status to Western Wireless on the Pine Ridge Reservation. In respect to the public interest issue, Project provides further analysis of the adverse effects of designation of a second ETC in the service area of such a low density Rural Telephone Company.

The Commission lacks jurisdiction to act on the petition.

Throughout the formal comment period and multiple ex-parte presentations in this proceeding, Project has consistently maintained that the Commission does not have jurisdiction to act on this

[1] According to an article in the September 22, 2002, *Billings Gazette,* Clifford Bird-in-Ground resigned as Chairman on September 5, 2002, but had transferred his signatory power to the Vice-Chairman in May 2002. *See*, www.billingsgazette.com/2002/09/22/stories/local/63-crow, and Chairman Bird-in-Ground's May 27, 2002, letter attached to Western Wireless' July 20, 2002, letter.

Petition. Project also has averred that assuming, *arguendo,* the Commission does have jurisdiction, the Commission cannot designate a second ETC in the service area of a Rural Telephone Company without following the procedures specified in Section 214(e)(5) of the Communications Act of 1934, as amended (the "Act"), 47 U.S.C. § 214(e)(5), and related rules.[2] In somewhat similar circumstances, the Commission found it had jurisdiction to act on Western Wireless' application for ETC designation on the Pine Ridge Reservation, and that it could without participation by the state define Western Wireless' service area as encompassing portions of the service areas of three Rural Telephone Companies.[3] For the reasons set forth below, Project submits that the jurisdictional and study area portions of the *Pine Ridge* decision were incorrectly decided and should not be followed in consideration of the petition for ETC designation on the Crow Reservation.

The *Pine Ridge* decision's jurisdictional analysis began by quoting the Supreme Court's *White Mountain Apache* decision[4] in support of the proposition that determination of the extent of state authority over non-Indians engaged in commerce on a reservation requires a "particularized inquiry into the nature of the state, federal and tribal interests." The Commission found that *White Mountain Apache* authorized it to undertake a "balancing of interests" test to justify its conclusion that Western Wireless' service to members of the Oglala Sioux is not subject to the jurisdiction of the South Dakota Public Utilities Commission because the Tribe's interests in regulating service quality and resolving complaints are more compelling than the state's interest in regulating telecommunications service throughout the state.[5] While the Commission accurately quotes *White Mountain Apache,* the Commission ignores its context. It follows from neither that decision nor many other relevant Supreme Court decisions, discussed below, that the Commission is authorized to "balance" these interests in order to preempt the authority of a state commission to act pursuant to an explicit Congressional delegation. The proper inquiry is not a balancing test of competing interests, but rather is an inquiry to discern Congressional intent.

Although the general rule is that the inherent sovereignty powers of an Indian Tribe do not extend to non-members, Project recognizes that the Crow Tribe has some authority to regulate non-member Western Wireless service on the Reservation, in accordance with the first exception to the general rule described in *Montana v. United States,*[6] because Western Wireless needs the Tribe's

---

2 *See*, 47 C.F.R. § 54.207.

3 In re Western Wireless Corporation, Petition for Designation as an Eligible Telecommunications Carrier for the Pine Ridge Reservation in South Dakota, Memorandum Opinion and Order, CC Docket No. 96-45, FCC No. 01-284, 16 FCC Rcd 18145 (2001) ("Pine Ridge Jurisdiction Order").

4 *White Mountain Apache Tribe v. Bracker*, 448 U.S. 136 (1980).

5 Pine Ridge Jurisdiction Order, para. 11.

6 *Montana v. United States*, 450 U.S. 565 (1981) (Tribe may regulate activities of non-members who enter into contractual relationships with the Tribe).

permission to conduct business on the Reservation. So much is true on any reservation.[7] Yet the practice throughout the country, including in Montana, has been that telecommunications services provided by non-Indians are regulated by state commissions, not by tribal authorities. The Commission's *Pine Ridge* decision erroneously concludes that state and tribal jurisdiction are mutually exclusive[8] and that tribal jurisdiction preempts the authority of the state Commission granted by Section 214 of the Act and the state legislature.

The Commission's apparent basis for finding preemption in the *Pine Ridge* case was the nature of the agreement between Western Wireless and the Oglala Sioux Tribe. The Commission found the agreement to be "directly related to the Tribe's sovereignty interests" because Western Wireless consented to tribal jurisdiction and because the contract purported to give the Tribe rights to participate extensively in administration of the service plan.[9] Supreme Court precedent makes clear that the sovereignty interests of an Indian Tribe focus on the "right of Indians to make their own laws and be governed by them,"[10] but none of these decisions finds preemption of state regulation in circumstances comparable to those on either the Pine Ridge or Crow Reservations.

The issue at hand is not whether the Crow (or the Oglala Sioux) have the authority to enter into a contract with Western Wireless regarding the provision of service on their respective reservations. Rather, the issue is whether the existence of that tribal authority to contract preempts the explicit delegation of regulatory authority to state commissions by Congress and the state legislatures. The *Pine Ridge* decision provides no rationale for the leap in logic from the Tribe's authority under the *Montana* exception to preemption of the state's ETC designation authority. In any event, Western Wireless' agreement with the Crow is considerably different from the Pine Ridge decision and does not purport to create a similar level of tribal involvement in the operation of the service.

---

7 *See, AB Fillins,* 12 FCC Rcd 11755 (1997) (Tribal Council not required by Communications Act to permit cellular operator to establish cell site on reservation).

8 *See, Kake Village v. Egan,* 369 U.S. 60,68 (1962); Letter of David Cosson to Magalie Roman Salas, September 17, 2001.

9 Pine Ridge Jurisdiction Order, para. 16. The Commission's formulation apparently relies on both the first and second exceptions established by the Supreme Court in *Montana*, but does not explain why the first exception recognizing tribal authority to regulate non-Indians who enter into consensual agreements is not sufficient and therefore why there is any basis to explore the *Williams v. Lee* issues. Project does not contest that Western Wireless' agreement with the Tribe establishes that the Tribe has regulatory authority, but maintains that whatever the extent of that authority, it does not preempt the authority of the Montana Public Service Commission under the Communications Act and Montana statutes.

10 *Williams v. Lee*, 358 U.S. 217, 220 (1959).

A different argument might be made regarding the Tribe's sovereignty interests if preemption of the state's authority to act on ETC petitions resulted in transfer of that authority to the Tribe. Nonetheless, whether the state commission or the FCC has authority to act on an ETC petition, the Tribe plainly does not.[11] Montana law authorizes the Montana Public Service Commission ("PSC") to act on ETC petitions in the state.[12] The PSC has stated on the record its willingness and authority to act on any ETC petitions filed in the state. There is no reason consequently, except perhaps to facilitate forum shopping, for the Commission to adopt an extreme view of preemption of state authority in an area where the Commission acknowledges that the Act provides no guidance and in which the Commission otherwise has no expertise.[13]

No logical connection exists between the Tribe's inherent sovereignty rights and ETC designation. Federal, not tribal, law governs the grant of ETC designation. Only state commissions or the FCC have authority to grant ETC status. No tribal government has such authority because such authority exists solely as a matter of Congressional delegation. Whether any *potential* conflict exists between the regulatory powers of the Tribe, either inherent or contractual, and the regulation historically and customarily exercised by the state commission concerning rates, service quality, or complaint resolution is immaterial. There is no conflict between the state's power to grant ETC designation and the Tribe's right to regulate pursuant to a consensual agreement with a non-member, or the Tribe's inherent sovereignty rights because the Tribe has no right to grant ETC designation in the absence of a delegation by Congress. Where Congress has intended a tribal role in a regulatory program, it has explicitly so stated.[14]

The Supreme Court's decision in *Williams v. Lee*, 358 U.S. 217, 220 (1959), and its successors offer no support for the proposition, inherent in the FCC's *Pine Ridge* decision, that the right of Indian Tribes to "make their own laws and be governed by them" that ETC designations are to be made by federal instead of state regulators. Project reiterates that every modern case finding preemption involved an established federal Indian-specific program that the state sought to regulate or tax; the federal program occupied the field such that Congress could not have assumed the application of state laws. ETC designation is not an Indian-specific program and Congress not only assumed, but intended, administration by state agencies.[15]

---

[11] The Tribe and members of the Tribe can participate as an interested party and tribal members can vote for state commissioners.

[12] Sec. 69-3-840, Mont. Code Ann. (2001).

[13] In his dissent to the *Pine Ridge* decisions, Commissioner Martin stated: "…we have neither the experience, skill, nor authority to make these complicated and contentious decisions regarding the power of Indian Tribes and States."

[14] *See, e.g.*, 42 U.S.C. § 7601(d).

[15] These and other jurisdictional questions are discussed at length in Project's November 24,

In *Williams v. Lee*, the Court held the owner of a general store on the Navajo Reservation could not maintain an action in state court to collect for goods sold to tribal members. *White Mountain Apache v. Bracker*, 448 US 136 (1980), preempted state timber regulation where it directly conflicted with a detailed federal timber management program intended to generate revenue and stimulate commercial enterprise. *New Mexico v. Mescalero Apache Tribe*, 462 US 324, 327-28 (1983), involved preemption of state game laws from application to a federally supported tribal wildlife management program designed to generate revenues and employment and stimulate tribal enterprise. In *Merrion v. Jicarilla Apache*, 455 U.S. 130, 141 (1982), the Court upheld the Tribe's power to impose a severance tax on oil and gas extracted on the reservation by non-Indians. The Court stated that the Tribe's authority to tax non-Indians conducting business on the Reservation was an inherent power necessary to tribal self-government and territorial management. Nothing in the Western Wireless petition for ETC status on the Crow Reservation is comparable to these situations in which the Court preempted state authority or validated tribal authority to tax. Rather, the preemption cases all involve either attempts by states to impose their regulations or taxes or attempts by non-members to avoid tribal regulation or taxation where the issue directly involved issues of self-government. Such issues are not present where the tribal authority arises from a consensual agreement under the first *Montana* exception.

The Commission's *Pine Ridge* decision disregards the Supreme Court's instruction that tribal sovereignty is not an independent basis for preemption of state law, but rather a "backdrop against which the applicable treaties and federal statutes must be read." *Rice v. Rehner*, 463 US 713, 719 (1983). While the Commission in *Pine Ridge* recognizes the Court's two relevant substantial decisions of 2001, it significantly misses the point of those decisions.

In *Nevada v. Hicks*, 533 U.S. 353 (2001), the Court held that a tribal court did not have authority to adjudicate a tort action against state game wardens who executed search warrants at the reservation home of a tribal member. While the Commission correctly notes that this decision continued to follow the principles of *Montana*,[16] it relegates to a footnote and disregards as to service to tribal members the Court's statement that "the inherent sovereign powers of an Indian Tribe do not extend to the activities of nonmembers of the Tribe.... Where nonmembers are concerned, the exercise of tribal power *beyond what is necessary to protect tribal self-government or to control internal relations* is inconsistent with the dependent status of the Tribes, and so cannot survive without express congressional delegation."[17] In *Pine Ridge* the Commission preempted the state on the basis that

---

2000, Comments on Western Wireless' Jurisdictional Supplement and in Ex Parte letters filed March 27, 2001, and June 29, 2001.

16 Pine Ridge Jurisdiction Order, para. 14

17 *Id*. at para. 22, n.54.

Western Wireless' contract with the Tribe was related to the Tribe's interest in regulating transactions between its members and in exercising authority over the provision of communications services "that affect the welfare of the Tribe."[18]

The Tribe may well have an "interest" in regulating transactions, and the service may "affect" the welfare of the Tribe. Nonetheless, neither an interest nor an effect is sufficient to meet the "except to the extent *necessary*" test established by the Court. Such is especially compelling in consideration of the fact that the Tribe, in any event, has no authority to act on ETC petitions. The Court in *Nevada v. Hicks* provided specific examples of the authority *necessary* to protect tribal self-government: punishing tribal offenders, determining tribal membership, regulating domestic relations among members and prescribing inheritance. Further, as the Commission acknowledged, assertions of regulatory authority over nonmembers must be connected to the right of sovereign Indians to make their own laws and be governed by them.[19] The Court cautioned, however, that this right "does not exclude all state regulatory authority on the reservation. State sovereignty does not end at a reservations border... Ordinarily, it is now clear, an Indian reservation is considered part of the territory of the State.... When...state interests outside the reservation are implicated, States may regulate the activities even of Tribe members on tribal land..."[20]

Similarly, in *Atkinson Trading Co., Inc. v. Shirley,* 533 U.S. 645 (2001), the Court found that the Navajo Nation could not tax a hotel on non-Indian fee land as there had been no consent and the operation of the hotel did not threaten or directly affect the political integrity, economic security or the health or welfare of the Tribe.

In summary, Project recognizes that the Crow Tribe, like Tribes on all recognized reservations, has some jurisdiction over non-Indians, such as Western Wireless, who voluntarily agree to provide services on its reservation. Although the extent of that jurisdiction is not clear, and the record contains no substantive discussion as to its extent, there is no dispute that the Tribe possesses no jurisdiction to act on ETC designations. Similarly, it is undisputed that the Montana legislature has unambiguously granted such authority to the PSC, and that the PSC has made clear its willingness to act on any ETC petition filed with it. Such conditions provide no justifiable rationale by which the Commission can preempt state authority. The FCC could find that it has jurisdiction only by concluding that the existence of some tribal non-exclusive jurisdiction —which would not include authority to grant ETC designation— somehow preempts such authority explicitly delegated to the state commission. But such is an irrational result, and is one for which the Commission will be entitled to no deference on judicial review.

---

18 *Id*. at para. 16.

19 *Id*. at para. 17, n.47.

20 *Nevada v. Hicks*, 533 U.S. at 361-62.

Section 214(e)(5) requires that the Service Area of an ETC must be a geographic area and equal to a Rural Telephone Company's Study Area. The creation of a subscriber-based designation is not permitted by law and is administratively unworkable.

Section 214(e)(5) of the Act is clear and unambiguous: neither a state nor the FCC may designate a second ETC for a service area in an area served by a Rural Telephone Company unless and until the Commission and the states, taking into account recommendations of a Joint Board, establish a different definition of service area. 47 U.S.C. § 214(e)(5), Three incumbent local exchange carriers ("ILECs"), two of which are Rural Telephone Companies, serve the Crow Reservation. All three ILECs serving the Pine Ridge Reservation are Rural Telephone Companies. In the *Pine Ridge* decision, however, the Commission failed to follow the procedure mandated by Section 214(e)(5). Instead, it created a subscriber-based service area for Western Wireless that included only the tribal members in the on-reservation portions of the ILEC's study areas.

The Commission denied Project's Petition for Reconsideration in regard to the designation of Western Wireless as an ETC in portions of the study areas of Rural Telephone Companies in Wyoming.[21] In the Wyoming decision, the Commission asserted that it was without authority to designate any portion of the study area of a Rural Telephone Company that is outside the borders of the state of Wyoming.[22] In *Pine Ridge,* however, the Commission took an additional step and found that it could not designate Western Wireless as an ETC to the extent it serves reservation non-members.[23] This additional step creates additional issues not present in the *Wyoming* case, and which must be addressed if the Commission intends to pursue a similar course in Western Wireless' Crow Reservation petition.

---

[21] In re Petitions for Reconsideration of Western Wireless Corporation's Designation as an Eligible Telecommunications Carrier In the State of Wyoming, *Order on Reconsideration*, CC Docket No. 96-45, FCC 01-311 (2001) ("Wyoming" decision).

[22] In re Western Wireless Corporation Petition for Designation as an Eligible Telecommunications Carrier in the State of Wyoming, *Memorandum Opinion and Order*, CC Docket No. 96-45, DA No. 00-2896, 16 FCC Rcd 48, 57-58 (2000).

[23] Pine Ridge Jurisdiction Order, para. 25; In re Federal-State Joint Board on Universal Service, Western Wireless Corporation Petition for Designation as an Eligible Telecommunications Carrier for the Pine Ridge Reservation in South Dakota, *Memorandum Opinion and Order*, CC Docket No. 96-45, FCC No. 01-283, *rel'd* Oct. 5, 2001 ("*Pine Ridge Designation Order*"), para. 17. Western Wireless asserted that it only served tribal members on the Pine Ridge Reservation, but has not made that claim regarding the Crow Reservation. Neither Western Wireless, nor the Commission explained how, as a common carrier, Western Wireless could refuse service to non-tribal members.

In the Wyoming decision, carving up the Rural Telephone Companies' study areas left Western Wireless with an ETC designation for a geographic "service area" which at least is consistent with the statutory definition of Section 214(e)(5): "The term 'service area' means a geographic area...." The *Pine Ridge* "service area", however, essentially is authority for Western Wireless to receive Universal Service Fund (USF) support for service to tribal members—which is not a geographic area. The conclusion that the Commission has jurisdiction with respect to service to tribal members within the Reservation boundaries fails to take account of the distinction described in *Montana* and subsequent Supreme Court decisions between a Tribe's authority over trust land and fee land. Designation by status of the subscriber is therefore inconsistent with both the statute and Supreme Court precedents.

In addition to its legal infirmities, the Commission decision to designate ETC status by subscriber creates several practical administrative problems that will make accurate USF support payment extremely difficult. Western Wireless will receive support for service provided only to tribal members. It, as well as the Tribe, therefore, has every incentive to simply treat all subscribers as tribal members. For this designation to work, some means of assuring tribal membership of Western Wireless subscribers must be implemented. The Commission, however, failed to prescribe whether a household with member and non-member inhabitants is free to designate the member as the subscriber. Furthermore, the Commission provides the USF Administrator with no guidance as to how it is to audit compliance with this service area definition. These issues are more important on the Crow Reservation than on Pine Ridge because of the higher percentage of non-members (and fee lands) within the Crow Reservation boundaries.

The Commission must find that designation is in the public interest before it may designate Western Wireless as an ETC. Competition alone is insufficient to support a public interest finding. Western Wireless designation may actually impede the availability of widespread quality and advanced telecommunications services to the Crow Reservation.

Section 214(e)(6) of the Act specifies that the Commission *may* designate a second ETC in the service area of a Rural Telephone Company *if* the second carrier meets the requirements of subsection (1) *and* the Commission finds the designation is in the public interest. 47 U.S.C. § 214(e)(6) (emphasis added). These requirements contrast with those for a second ETC in the area of a non-rural telephone company where the Commission *shall* designate a second carrier if it meets the requirements of subsection (1) and no separate public interest finding is required. Id. Because designation of a second ETC will tend to make competition more likely[24] in the service area of either a rural or non-rural

[24] There is no evidence on the record, however, that ETC designation is necessary for Western Wireless to offer its service. Western Wireless asserts that it will utilize its existing network, and thus Western Wireless will be required to purchase terminal equipment for additional subscribers only at the time the subscriber contracts for service.

telephone company, it necessarily follows that the public interest finding in the case of a Rural Telephone Company must be based on a finding of public benefits beyond those expected as a result on increased competition.

In each of its previous ETC decisions where the ILECs were Rural Telephone Companies, including *Pine Ridge,* the Commission has found that it was in the public interest to designate a second ETC. Although the Commission recognized that there might be some rural areas incapable of supporting more than one ETC, the Commission found no evidence that demonstrated that such would be the case on the Pine Ridge Reservation.[25]

The Commission also recognized a Congressional concern that consumers would stop receiving adequate service if, following designation of a second ETC, the ILEC exercised its option to relinquish ETC status.[26] It nonetheless granted the designations because it "was not persuaded" that the ILECs would be forced to relinquish their designations or withdraw service altogether.[27] Like its finding that the ILECs had not demonstrated the area could not support more than one ETC, the Commission did not discuss the record submissions of the ILECs on these points except to state that they were unpersuasive. Nor, on the issue of withdraw, did the Commission conclude whether consumers would be adequately served if any of the ILECs voluntarily relinquished their ETC status or withdrew from the provision of service.

In the *Pine Ridge* decision, the Commission found that members of the Tribe would benefit from the promotion of competition by increased choice and the availability of innovative service and new technologies, and that the presence of a second ETC would create incentives for the incumbents.[28] The Commission found that designation would increase subscribership by removing impediments that it had found in the *Twelfth Report and Order* to be generally operable on tribal lands. Among these impediments were cost of basic service, cost of intrastate toll, inadequate infrastructure, cost of line extensions, and lack of competitive alternatives. Although the record contained varying estimates of penetration, because even the highest estimates were below the national average, the Commission concluded, without finding a logical nexus, that the impediments it had found for reservations generally must exist, i.e., lack of access to service or affordability. The Commission also found that Pine Ridge Reservation members would receive substantial benefits not available from the ILECs, specifically an

---

25 Pine Ridge Designation Order, para. 15. The Commission apparently did not consider the September 21, 2001, Ex Parte filing by Golden West Telecommunications Cooperative, Inc., which included a study describing potential rate impacts on its subscribers of granting ETC status to Western Wireless.

26 *Id*. at para. 16.

27 *Id*.

28 *Id*. at paras. 11-13.

expanded calling area and elimination of line extension charges.[29]

Like the Pine Ridge Reservation, the Crow Reservation also has telephone penetration below the national average. Nevertheless, the record demonstrates that, at least for the areas served by Project and Range, penetration rates are substantially higher than comparable reservations. Project has provided detailed information showing that penetration in its exchanges exceeds 80 percent.[30] Western Wireless has not directly challenged this data, although it continued to imply that the 1990 census data, a period prior to Project's acquisition of the exchanges in 1994, could be relied upon.[31]

Data released by the Census Bureau last month show that as of the 2000 census, 87.2% of households in Project's territory have service and 85.3% of all households on the Crow Reservation have telephone service. Although not directly reported by the Census Bureau, it appears that this penetration rate is representative of both the 81% of the Reservation that is Native American and white population. The "Percent Native American" map exhibit, attached, shows that two census block groups with above 81% Native American population have 88.1% and 81.6% penetration.

The record also demonstrates that the below national average penetration on the Reservation is not the result of lack of availability of service, or affordability. Project's facilities pass virtually all inhabited dwellings on its portion of the Crow Reservation, and Project has aggressively promoted the special $1 per month lifeline service. Currently approximately 35% of residential subscribers participate in that program. Project has also devoted considerable time and expense to obtaining regulatory approval to expand its local calling area. As a result, Crow Reservation subscribers now have toll free access to Billings, the major trading area in the region.

Project has also aggressively deployed advanced technology on the Crow Reservation, including CLASS services, local access to Internet and DSL. These services will not be available from Western Wireless.

In addition to advanced services, Project's POTS service is superior to Western Wireless' service in many respects. Unlike Western Wireless' service, Project's service is generally not subject to disruption caused by adverse weather or power outage, and is not affected by terrain or vegetation variation. Furthermore, unlike Western Wireless' service, Project's service provides much higher data

---

29 *Id*. at paras. 11-16.

30 *See*, Letter from David Cosson to Magalie Roman Salas, FCC, March 21, 2000 ("March 2000 Ex Parte") Letter from David L. Sieradzki to Magalie Roman Salas, FCC, March 8, 2000, asserting 65% of Crow households without telephone service.

31 In its ETC Petition, Western Wireless claimed, "only 45.1 percent of the households on the reservation have access to basic telephone service." Petition at 2-3.

transmission speed for Internet access, is engineered to meet industry standards for busy hour blockage, and can be used in health care facilities.

Project offers quality and widespread services on the Crow Reservation that are not typically found on other reservations. As a result, designation of a second ETC simply would promote an alternative supplier, albeit of an inferior product. It would not be expected to provide any material benefits to the members of the Crow Tribe in terms of access, affordability, calling scope, or advanced services. As explained in more detail below, however, the presence of a second ETC would be expected to substantially reduce Project's economies of scale by reducing its effective subscriber density. As a consequence, Project would be less likely to be able to continue to provide high quality service at affordable rates.

National USF problems impact the situation on the Crow Reservation and would be exacerbated by a Western Wireless ETC Designation: Application of the McLean and Brown White Paper to Project Telephone Company's Crow Reservation Exchanges

On June 25, 2002, the consulting firm McLean and Brown published the attached paper entitled *USF Portability—Getting it Right* ("USF Paper"), which addresses considerations relevant to making the public interest determination required by Sections 214(e)(2) and (e)(6) of the Act prior to designation of a second ETC in the area served by a Rural Telephone Company. The paper postulates that the commission, state or federal, making the determination should be guided by a determination of whether, in each case, the public benefits exceed the public costs of such designation. The benefits of a second ETC are taken from the Commission's *Wyoming* decision and the USF Paper notes that the Commission found no evidence in that case which would demonstrate that a particular area is incapable of sustaining more than one ETC. McLean and Brown then proceed to suggest that there are at least two quantifiable public costs to be examined in such public interest determinations: increase in the USF fund and loss of network efficiencies.

Under the present rules, ETCs other than the ILEC receive USF support at the per line rate of the ILEC. Such support is based on the ILEC's costs. The USF Paper documents the dramatic growth in the support paid to competitive ETCs in the current year. Project is aware that the issues of fund size, recovery and portability are under consideration in existing or planned policy proceedings, and would point out here only that given Project's USF recovery of approximately $37.00 per month per line, that a second ETC serving the same subscribers on the Crow Reservation could increase the fund size by over $600,000 per year.

The other cost identified by McLean and Brown is loss of network efficiencies by the ILEC. As Commissioner Martin noted in his separate statement to the *MAG* decision, supporting a second ETC "may make it difficult for any one carrier to achieve the economies of scale necessary to serve all of the

customers in a rural area, leading to inefficient and/or stranded investment."[32] McLean and Brown quantify this observation using data from the Commission's cost model. As shown by Charts 3 and 4 of the USF Paper, cost of service increases only slowly with decreasing density until density goes below 100 households per square mile, at which point cost increases geometrically. Adding a second ETC will naturally tend to reduce the average density of the incumbent. When that density is reduced in an area in the steep portion of the cost curve, there will be a significant efficiency loss.

Applying these observations based on nationwide data to the Project exchanges on the Crow Reservation demonstrates the following. First, the overall density of the territory is extremely low. Average population density on the Crow Reservation is 0.7 households per square mile, while density within the portions of the Reservation served by Project is only 1.4 households per square mile. As identified in the paper, it is also necessary to identify the percentage of households that are clustered into higher density areas, versus the percentage of the lines that are located in the 0 to 5 and 5 to 100 households per square mile density zones. The following Table 1 summarizes this data for the Crow Reservation and for the Project Telephone Company exchanges on the Reservation:[33]

Table 1

Households per Square Mile	Crow Reservation	Project Tel. on Crow Res.
0 to 5	29.0%	19.0%
5 to 100	37.8%	37.5%
Over 100	33.4%	43.4%

Map 1, attached, shows the Crow Reservation area and Project boundaries, and illustrates the size and density characteristics of the area. Approximately two-thirds of the Reservation area is less than 100 households per square mile, and 29% is less than 5 households per square mile.

Table 1 and Map 1 do not tell the entire story of this area, however. Table 2 and Map 2 provide a more granular look at the density characteristics of this area. They do so by dividing the 0 to 5 density zone into three sub-zones. The first is comprised of the land areas where the 2000 Census indicates no housing units. The other two reflect areas with 0 to 1 and 1 to 5 households per square mile. The 5 to 100 zone is also divided into three sub-zones reflecting 5 to 10, 10 to 50, and 50 to 100 households per square mile. Customers are distributed within these sub-zones as follows:

---

[32] Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers, 16 FCC Rcd. 19613, 19770 (2001).

[33] Project exchanges outside the Crow Reservation do not factor into Table 1 or 2.

Table 2		
Households per Square Mile	**Crow Reservation**	**Project Tel. on Crow Res.**
0 to 1	13.2%	7.1%
1 to 5	15.8%	11.9%
5 to 10	15.1%	16.5%
10 to 50	19.4%	18.4%
50 to 100	3.1%	2.6%
Over 100	33.4%	43.4%

Map 2, attached, clearly shows that large portions of the Reservation have no housing units at all. It also shows that equally large areas of the Reservation have housing units at a density of less than 1 household per square mile. The scale bar in the lower left corner of the map indicates that many of these sparsely populated areas are great distances from the central office, sometimes 20 miles or more. These conditions of extremely sparse population distribution and extremely long loop length result in extremely high levels of cost to serve these customers, well in excess of the cost shown on Chart 3 of the USF Paper, which were based upon nationwide average conditions.[34] It should also be noted that a significant number of the housing units are at the low end of the FCC-prescribed density zones. For example, in the 5 to 100 household per square mile density zone, almost all of the housing units are less than 50 per square mile, and a sizeable portion are less than 10. Due to the exponential nature of the cost/density relationship, the lines at the low end of the range are significantly more costly than would be the nationwide average for the density range. Similarly, almost half of the lines in the 0 to 5 households on the Reservation are less than 1 household per square mile, and truly "off the chart" with respect to the numbers shown on Chart 3.

All of the above suggests that there will be significant additional USF funding costs and loss of network efficiency costs created by the designation of a second ETC in this area, as the effective density of Project's already high cost service area decreases as the market is split between two or more providers. As the record demonstrates, because Project has facilities passing virtually all households, does not generally require aid-to-construction, has expanded toll free calling into Billings, and actively promotes the $1.00 per month lifeline service there is no material group of potential customers on the Crow Reservation for which service is not available, or is unaffordable.

---

[34] As noted in the USF Paper, these publicly available proxy results include all rural and non-rural study areas, and were developed using cost factors based upon the scale economies of the RBOC holding companies. As a result, they represent an extremely conservative view of cost levels that are experienced by a rural company such as Project serving very sparsely populated areas.

Conclusion

In order to act on Western Wireless' petition the Commission must find that Western Wireless' service is not subject to the jurisdiction of the Montana Public Service Commission. Since the Montana statute on its face grants jurisdiction to act on ETC designation requests, the PSC asserts such jurisdiction, and it is the clear intent of Congress that state commissions act on such requests wherever they have jurisdiction, the Commission must find some source of preemption which renders the jurisdictional grant by the Montana legislature invalid. In the *Pine Ridge* decision the Commission found, in effect, that Western Wireless' agreement with the Oglala Sioux was so important to tribal sovereignty that the tribe's authority to regulate the activities on non-Indians necessarily required the Commission to preempt the South Dakota Public Service Commission and decide the designation request itself. Project submits that this decision was fundamentally erroneous and that the Commission should not repeat this error by applying a similar rational to the Crow Reservation Petition.

The additional error of the *Pine Ridge* decision in creating a service area which encompasses portions of the study areas of Rural Telephone Companies and which is not a geographic area should also not be repeated on the Crow Reservation.

But even if the Commission had jurisdiction, in order for it to designate Western Wireless as an ETC, it must first find that such designation is in the public interest. For this to be the case, Western Wireless has the burden of proving that the benefits created by its designation as and ETC are at least as great as the costs that their designation will create. This they have not done.

The evidence set forth above, however, demonstrates that designation will result in substantial loss of economic efficiency for Project, to the ultimate detriment of its subscribers. For this reason the Commission must deny their petition.

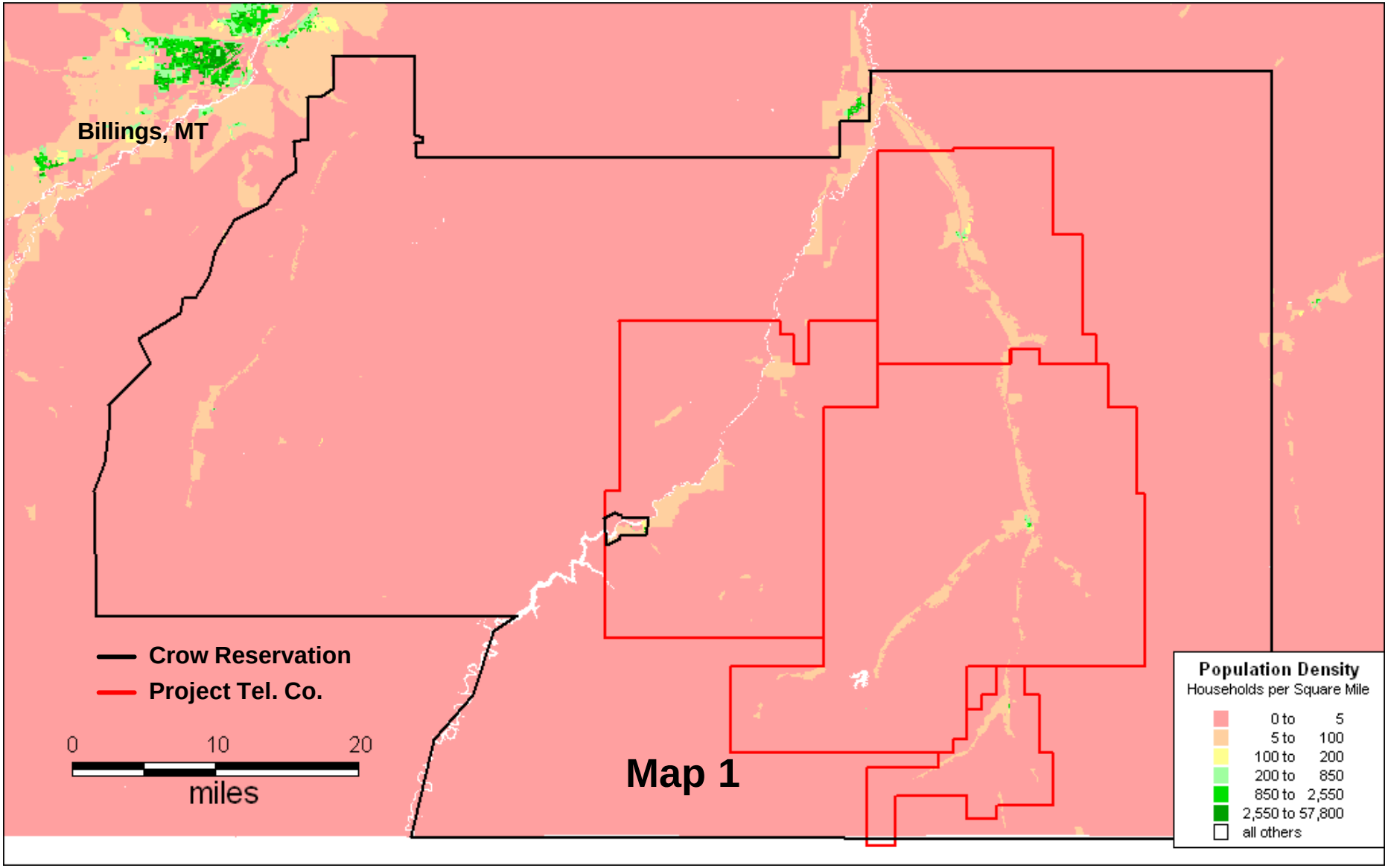
Sincerely,
/s/
David Cosson
Counsel to Project Telephone Company

Enclosures

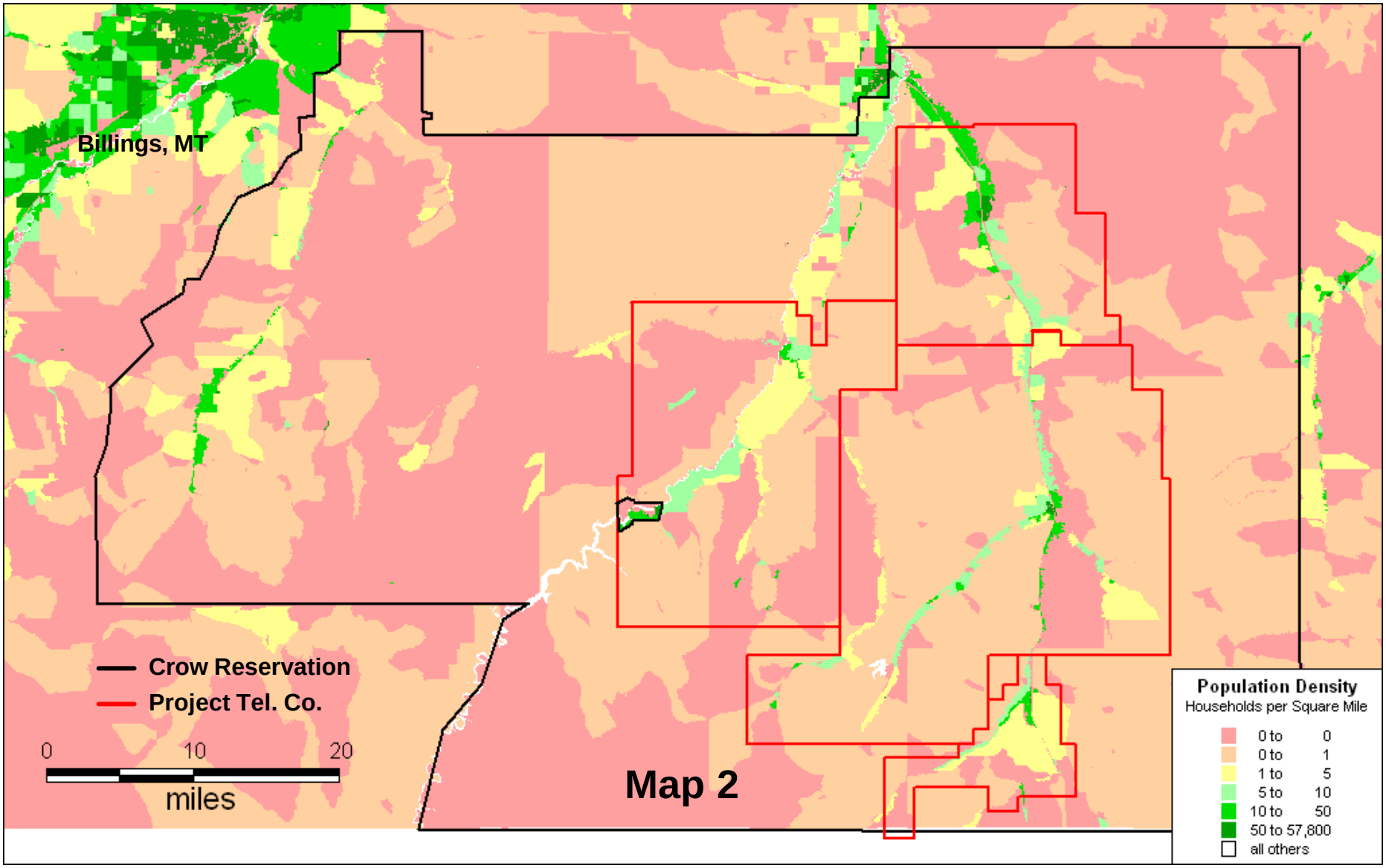
Maps
Project Telephone Co. Density Data
McLean & Brown, "USF Portability—Getting it Right" White Paper

cc: Chairman Powell
Commissioner Abernathy
Commissioner Copps
Commissioner Martin
Bryan Tramont
Matthew Brill
Jordan Goldstein
Dan Gonzalez
William Maher, Chief, WCB
Carol Mattey, WCB
Katherine Schroder, WCB
Anita Cheng, WCB
Richard Smith, CGB
Linda Kinney, OGC
Andrea Kearney, OGC
Jane Mago, OGC

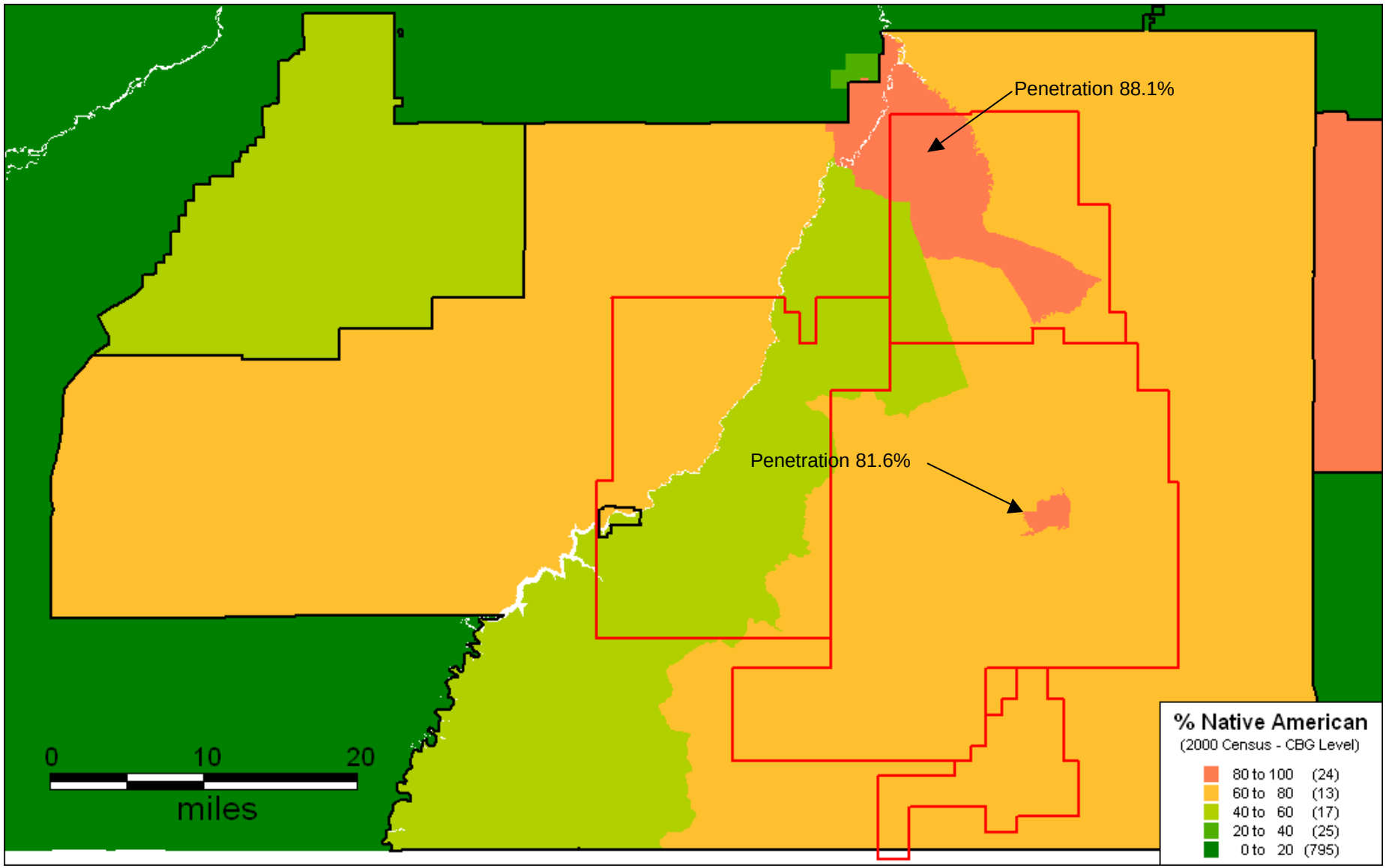
Density – Normal Scale



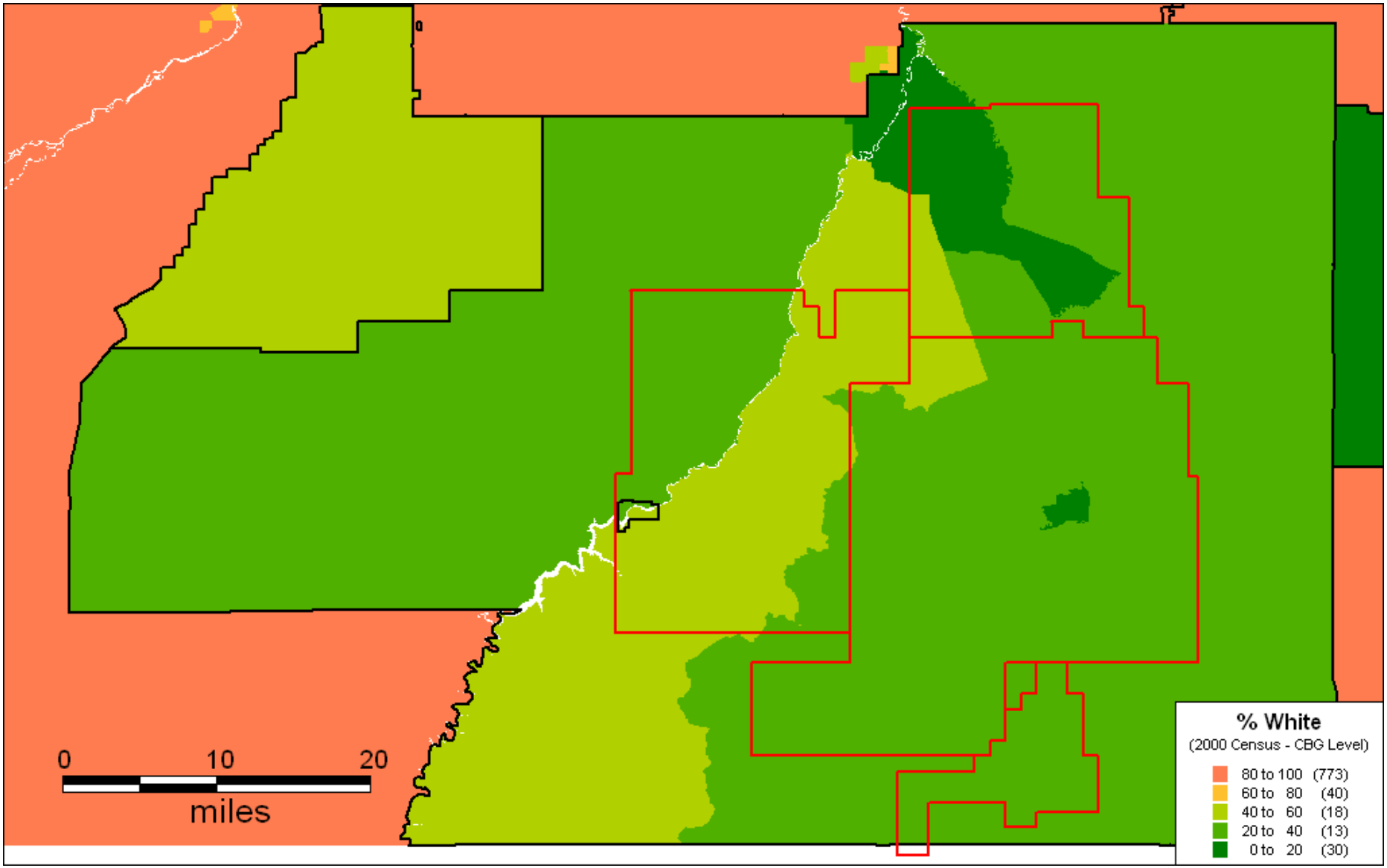
Density – Low Scale



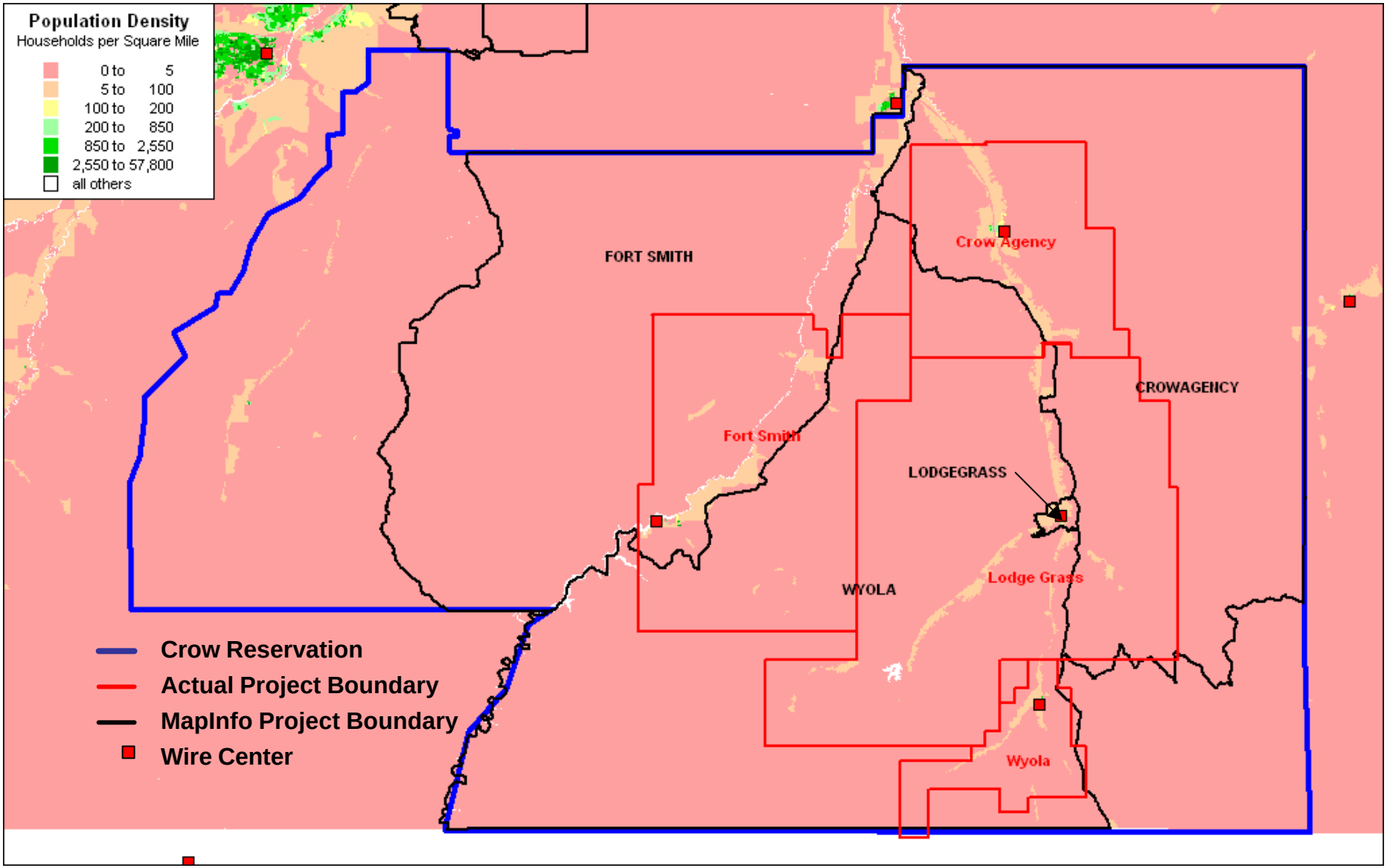
Percent Native American



Percent White



Boundary Issue



Project Telephone Data - 2000 Census

Household Density Data

Zone	Crow Res. Households			Project Telephone Company Households: Crow Ag.	Ft. Smith	Lg. Grass	Wyola	Total		
0 to 1	318	13.2%		17	21	78	3	119	7.1%	
1 to 5	379	15.8%	29.0%	50	50	60	39	199	11.9%	19.0%
5 to 10	364	15.1%		59	76	122	18	275	16.5%	
10 to 50	465	19.4%		167	37	75	29	308	18.4%	
50 to 100	75	3.1%	37.6%	29	8	7	0	44	2.6%	37.5%
100 +	802	33.4%	33.4%	234	201	260	30	725	43.4%	43.4%
	2,403			556	393	602	119	1,670		
Area(sq mi)	3,566.7			198.8	340.9	547.4	70.7	1,157.8		
HH/sq mi	0.7			2.8	1.2	1.1	1.7	1.4		

Telephone Penetration Data

Crow Res.	85.3%
Project Tel.	87.2%

Population by Race

	Crow Reservation		Project Telephone	
White	1,514	22.1%	853	16.9%
Native Am.	5,153	75.3%	4,094	81.2%
Other	178	2.6%	97	1.9%
	6,845		5,044	

McLean Brown
9/22/02

McLean & Brown

ISSUE UPDATE

SPECIAL EDITION

June 25, 2002

USF Portability – Getting it Right

Introduction

In our last white paper ***The Coming Train Wreck in Universal Service Funding – Why is it coming and how do we avoid it?*** (Issue Update January 18, 2002) we outlined several forces that were causing the size of the universal service fund to grow at significant and unsustainable levels. One of those factors is portability of support to Competitive Eligible Telecommunications Carriers (CETCs). In this paper we will focus on portability of high-cost universal service support, and how portability issues can be addressed in a manner that both the pro-competitive and universal service goals of the 1996 Act can be achieved.

In his separate statement accompanying the MAG Order, Commissioner Kevin Martin made the following observation:

> I also note that I have some concerns with the Commission's policy – adopted long before this Order – of using universal service support as a means of creating "competition" in high cost areas. I am hesitant to subsidize multiple competitors to serve areas in which costs are prohibitively expensive for even one carrier. This policy may make it difficult for any one carrier to achieve the economies of scale necessary to serve all of the customers in a rural area, leading to inefficient and/or stranded investment and a ballooning universal service fund.[1]

In this paper we will outline a framework to examine the issue of portability of high-cost universal service support to determine areas where portability may be in the public interest, and areas where it may not. We will develop an analytical construct to measure the public benefits and public costs of portability. We will also present a tool, using publicly available data, to identify rural areas of "extreme cost" where, as Commissioner Martin observes, costs are prohibitively expensive even for one carrier. Finally, we will comment on other policy issues raised by the portability question.

[1] 2nd R&O and FNPRM in CC Docket No. 00-256, 15th R&O in CC Docket No. 96-45, and R&O in CC Docket Nos. 98-77 and 98-166, Released November 8, 2001, ***Separate Statement of Commissioner Kevin J. Martin.***

Implementing the 1996 Act

Section 214(e) of the Act states that support is only available to Eligible Telecommunications Carriers (ETCs), and specifies the rules for designation of an ETC. Section 214(e)(1) provides that to be an ETC, a carrier must offer the defined list of universal service services as specified by the Joint Board and the FCC, and that the carrier must advertise its services in media of general distribution. Section 214(e)(2) specifies the rules for the designation of multiple ETCs. It provides different rules for study areas served by rural and non-rural carriers. Specifically, it states:

- The Commission may for rural companies, and shall for non-rural rural companies, designate more than one ETC.
- Before designating additional ETCs for a rural company area the State PUC shall find that the designation is in the public interest. (emphasis added)

Thus, before a CETC is designated in a rural study area, an affirmative finding must be made that such designation serves the public interest. In the remainder of this paper we will focus on the public interest aspects of multiple ETCs, and what factors would influence whether or not a particular CETC designation would advance the public interest.

Section 254 outlines the universal service principles of the 1996 Act. Six basic principles are provided calling for comparable services at comparable and affordable rates in both urban and rural areas. It also calls for specific, predictable and sufficient support mechanisms, and equitable contributions from all interstate telecommunications providers. In a seventh "principle", Congress provided for "…other principles as the Joint Board and the Commission determine are necessary and appropriate for the protection of the public interest, convenience, and necessity and are consistent with this Act". In the Joint Board recommendation made in November, 1996, as well as in the FCC's decision in May, 1997, an additional principle of "competitive neutrality" was added as they felt that this would be consistent with the Act's general encouragement of competition in local telecom markets.

Measuring the Public Interest

While Congress directs Commissions to approve an ETC filing for a rural study area only when it is in the public interest, they provide no specific guidance as to how such a determination should be made. We would suggest that a reasonable means of doing so would be the method normally used when facing any decision – do the benefits outweigh the costs? Specifically in this case, do the public benefits of having multiple ETCs exceed the public costs of supporting multiple ETCs. This relationship can also be expressed as a formula as follows:

Public Benefits – Public Costs = Public Interest Impact

If the benefits exceed the costs, then the impact is positive. Conversely, if the costs exceed the benefits, then the impact would be negative.

Following are some of the major benefits and costs that might be expected from having multiple ETCs in a given area:

Benefits:
- Additional market entrants
- Service to higher-cost areas that competitors would not serve absent support
- General benefits of a competitive market including:
  - Additional customer choices of suppliers and technology
  - Lower price/higher quality

Costs:
- A larger fund size resulting in higher assessments on all users
- Higher costs for all suppliers as multiple networks are less efficient than a single network

Benefits of Multiple ETCs

The benefits of having multiple ETCs are those generally associated with competition in any market – greater choice, lower prices, more services, etc. Federal and state decisions supporting ETC designations have not specifically quantified such benefits, and rarely have considered any of the potential costs of portability of support.[2] The FCC's Order granting the application of Western Wireless for ETC status in the state of Wyoming provides a good example of the type of generalized reasoning that is found in decisions granting ETC status in rural areas.[3] In this Order the Commission states:

- Wyoming consumers will benefit from the provision of competitive service and new technologies in high-cost and rural areas.
- An important goal of the Act is to open local telecommunications markets to competition.
- Designation of competitive ETCs promotes competition and benefits consumers in rural and high-cost areas by increasing customer choice, innovative services, and new technologies.
- It will also provide an incentive to the incumbent rural telephone companies to improve their existing network to remain competitive, resulting in improved service to Wyoming consumers.
- The provision of competitive services will facilitate universal service to the benefit of consumers in Wyoming by creating incentives to ensure that quality services are available at "just, reasonable and affordable rates".
- Rural consumers may benefit from expanded local calling areas by making intrastate calls more affordable to those consumers.

The Commission does address concerns regarding possible negative consequences of competition in rural areas, but does so in a very general and dismissive manner:

- We find no merit to the contention that designation of an additional ETC in areas served by rural telephone companies will necessarily create incentives to reduce investment in infrastructure, raise rates, or reduce service quality to consumers in rural areas.
- To the contrary, we believe that competition may provide incentives to the incumbent to implement new operating efficiencies, lower prices, and offer better service to its customers.
- While we recognize that some rural areas may in fact be incapable of sustaining more than one ETC, no evidence to demonstrate this has been provided relating to the requested service area.

In the last statement above, the Commission clearly lays down the challenge that any attempt to argue against ETC designation in certain high-cost rural markets will require strong and convincing facts and data. In the remainder of this paper we will lay out ideas on how to quantify the costs associated with portability of support in high-cost rural areas. We will focus on two major areas of cost - the cost of increased funding, and the cost of network inefficiencies.

Costs of Multiple ETCs

Increased Fund Size

As the number of companies eligible to receive funding increases, the demands on the fund are sure to grow. Under current federal rules, there is no limitation to the number of supported lines that an individual customer may have. There has been discussion of perhaps limiting support to one "primary line" to each customer location as a means of mitigating the growth of the fund. The primary line concept, however, brings with it additional complications that will be discussed more fully in a following section.

There is another problem associated with the grant of ETC status to existing carriers, particularly wireless carriers, that we will call the "customer list" problem. Many carriers applying for ETC status already provide service to customers within the study area for which they seek ETC designation. These customers were obtained under business plans that did not anticipate or require explicit support. When such a carrier is granted ETC status, however, they often request funding for all of the existing customer lines. This results in an immediate and significant increase in the size of the fund for little tangible near-term benefit. Some state Commissions have attempted to impose service requirements or pricing limitations on wireless carriers who have been granted ETC status, however the wireless industry has been insistent that federal law precludes state regulation of wireless services. When a wireless carrier (or any carrier who currently provides

[2] A recent exception occurred in Utah where the Utah Supreme Court recently upheld an order by the Utah PSC denying Western Wireless CETC status on the basis that this would increase demands on the state USF without any offsetting benefits.

[3] DA 00-2896 released December 26, 2000.

service in the study area) seeks ETC designation, it should be determined whether that carrier will seek support for pre-existing lines, and the costs of any such support must be included in the cost/benefit calculus.

Recent data regarding USF payments to CETCs tends to support the impact that the customer list problem is having on the overall fund size. Chart 1 shows the amount of support payments to CETCs for the third quarter of 2001 through the third quarter of 2002. It is evident that the amount of this funding is growing rapidly. Chart 2 shows the top 20 fund recipients for the third quarter of 2002 as shown on USAC report HC1. Of interest is the fact that 15 of the top 20 recipients are receiving their first payments from the fund in the third quarter.[4] This would tend to support the idea that the customer list problem is having a significant impact on the size of the fund, as their support begins at a high level.

CETC Support

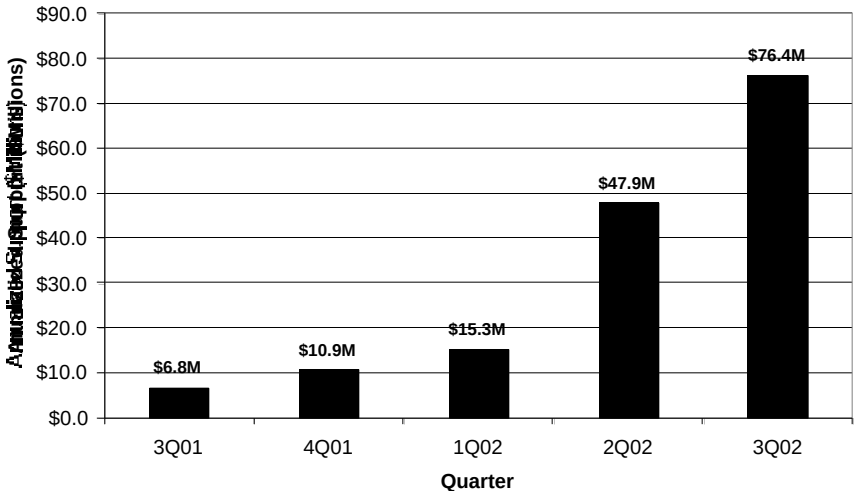


Chart 1

Company	State	Type	Annual
* CELLULAR SOUTH LICENSE	MS	R	$27,831,228
CENTENNIAL PCS OPER	PR	N	$15,089,856
SMITH BAGLEY	AZ	R	$7,145,508
UNITED STATES CELLULAR	WA	R	$6,082,608
* MIDWEST WIRELESS-MN	MN	R	$5,802,012
* MIDWEST WIRELESS-IA	IA	R	$2,035,884
* NE COLORADO CELLULAR	CO	R	$1,938,552
* VIRGINIA CELLULAR	VA	R	$1,739,700
* RCC HOLDINGS	AL	R	$1,377,804
* GUAM CELLULAR	MP	R	$1,045,188
* RFB CELLULAR	MI	R	$945,972
* HARGRAY WIRELESS	SC	R	$756,888
* MCI METRO	NY	N	$651,096
* MID-RIVERS TEL COOP	MT	N	$475,668
* CUMBY TEL	TX	N	$470,568
* WESTERN WIRELESS	SD	R	$405,516
WESTERN WIRELESS	MN	R	$340,668
BEN LOMAND COMM	TN	R	$282,864
* SANTA ROSA TEL	TX	N	$254,508
* GCI	AK	R	$170,052

Source: USAC HC1 3Q02

* Indicates 3Q02 is the first quarter in which company is receiving funding

Chart 2

[4] There appear to be several anomalies in the USAC data. As an example, in 2Q02 Centennial PCS is shown as receiving $37M in funding vs. $7.8M 1Q02 and $15.1M 3Q02.

Network Efficiencies

The telecommunications industry is often said to exhibit economies of scale – that is, the larger the network, the lower the average cost of serving each of the customers connected to it becomes. This is due in large part to the high fixed costs associated with constructing a network. Telecommunications networks are also sensitive to the density of the serving area, with costs being inversely proportional to population density. In high-density urban or town areas, costs tend to be low, as customers are located close to one another, and infrastructure costs can be shared among more customers. In low-density rural areas costs tend to be high, since there are often long distances between customers, and fewer customers must shoulder the burden of fixed network costs. In the landmark ***White Paper II -- The Rural Difference***,[5] the Rural Task Force (RTF) documented the significant differences between rural and non-rural study areas. Key among these differences were low population density and high fixed costs.

The relationship of population density to cost can be easily seen in publicly available data from the FCC's proxy model proceeding. The following Chart 3 shows the nationwide average monthly cost of providing basic telephone service in each of the nine density bands identified by the FCC.[6] While the RTF found that proxy models were not sufficiently accurate to develop support requirements for individual rural companies, ***White Paper IV*** states that this is due to the inability to accurately estimate costs at the individual rural wire center or study area level.[7] By using a nationwide average of costs for each density zone, these individual inaccuracies will tend to average out, and the resulting data forms a reasonable basis for comparing the relative costs of the different density zones.

Households per Square Mile	Nationwide Average Cost
0 to 5	$133.00
5 to 100	$48.44
100 to 200	$30.72
200 to 650	$26.87
650 to 850	$25.05
850 to 2550	$23.11
2550 to 5000	$21.83
5000 to 10,000	$20.25
> 10,000	$18.16

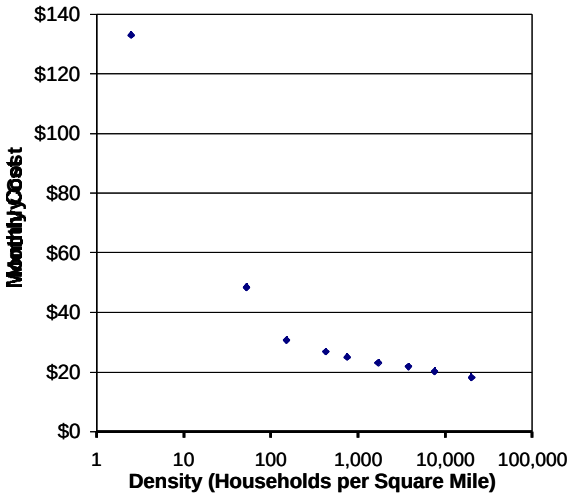


Chart 3

Source: BCPM3.0 with FCC Common Inputs

[5] Copies of this and other RTF documents referenced in this paper can be obtained on the RTF web site at www.wutc.wa.gov/rtf.

[6] The data is taken from the BCPM 3.0 with FCC Common Inputs. The BCPM is the only model with publicly available data for all rural and non-rural study areas. Other proxy models show a similar relationship of density to cost.

[7] See ***White Paper IV- A Review of the FCC's Non-Rural Universal Service Fund Method and Synthesis Model for Rural Telephone Companies,*** at Page 10.

What is clear from the data on Chart 3 is that costs increase gradually with decreasing population density until around 100 households per square mile. Below this level costs increase geometrically as density decreases. When two or more ETCs serve the same territory, the average subscriber density for each will be less than if a single company served the same territory. One possible way to measure the efficiency loss experienced by funding more than one ETC is to look at the increase in average cost that will be experienced as a result of the decrease in average density. The following Chart 4 illustrates this for two different scenarios:

Company A, shown on the right side of the chart, serves a densely populated area with relatively low costs. If the entry of an additional carrier results in a reduction in subscriber density from A_1 to A_2, the resulting efficiency loss is negligible. On the other hand, Company B, shown on the left side of the chart, serves a relatively sparsely populated area. Notice that an equivalent reduction in density from B_1 to B_2 results in a significant and much larger loss of efficiency due to the nature of the density/cost relationship.

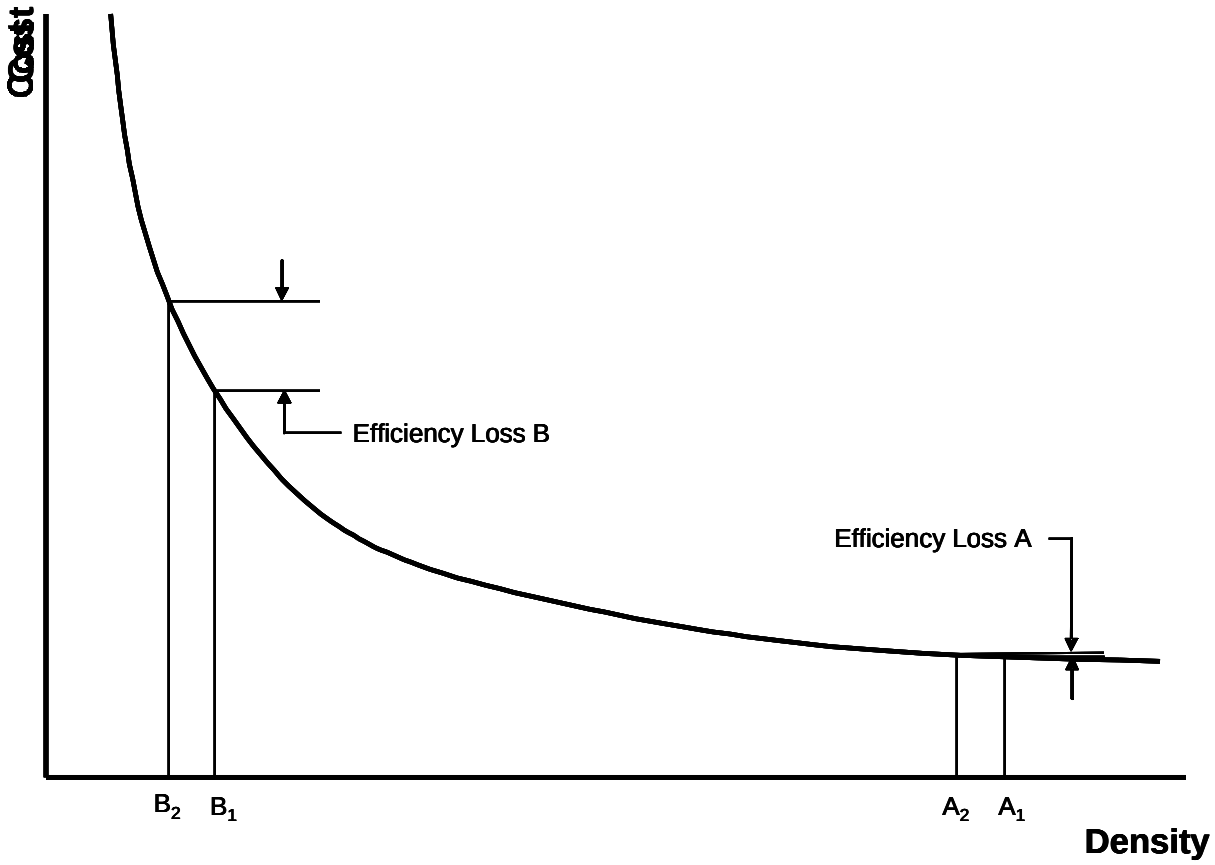


Chart 4

Note to Readers

Due to the importance of the subject matter, this ***Special Edition*** of the ***Issue Update*** is being made publicly available on the M&B web site, and may be distributed to other parties. Effective November 19, 2001 the McLean & Brown ***Issue Update*** underwent changes to provide more in-depth coverage of the fast moving world of universal service and access reform. At the same time, the publication began distribution on a subscription basis. Recent topics covered in the ***Issue Update*** have included summaries of FCC Orders regarding universal service and access reform, concise summaries of comments and reply comments in key FCC proceedings, and timely commentary on these critical issues.

For information on the ***Issue Update*** and to subscribe, visit the M&B web site at www.mcleanbrown.com.

Measuring Density/Cost Relationships

One way to approximate the increased costs associated with declining customer density is to use the data in Chart 3. This data represents nationwide average costs by density zone taken from the publicly available proxy model. Using the data points in two highest cost density zones (0 to 5 and 5 to 100), and using the mid-point of the range as the measure of density, it can be computed that each unit decrease in households per square mile in a serving area will result in an increase of approximately $1.70 per line per month for all of the lines in that particular area for densities within this range. For example, a decrease in density from 40 households per square mile to 30 households per square mile would result in an approximate $17 per line per month increase in cost for all customers in this service area. Since we are dealing with nationwide averages, these numbers should be viewed as approximate, however this data does confirm that there are significant costs associated with decreased customer density, particularly when density is less than 100 households per square mile.

Actual density statistics for particular service areas can be developed from publicly available data. A simple, but misleading, measurement of density can be performed by dividing the number of lines a company serves by the area of its serving territory. This would be misleading, since the cost of providing service is strongly influenced by the presence or absence of "clustering" of customers. A given number of customers uniformly distributed over the serving area would have very different cost characteristics from a situation where the same serving area had most customers densely clustered in a town, with only a few scattered through the surrounding area. Indeed, the cost data shown in Chart 3 was developed by examining the costs of small areas of geography.

A rural ILEC can experience a reduction in density and increase in cost in two ways. First, as described earlier, any reduction in total line count measured against a fixed land area will result in a reduction in average density for that particular area. Second, and more significant, the CETC is likely to compete most vigorously in the densely populated portions of the study area (a town for example) where costs will be lowest. To the extent that the CETC captures more of these lower-cost customers, the percentage of the ILEC's customers in the highest-cost zones will increase.

To analyze density and cost characteristics for real-world telephone companies, McLean & Brown has developed a database using data from the 2000 Census. This database starts with housing data at the Census Block level, and processes this data through sophisticated mapping software that includes telephone company wire center and study area boundaries. This allows the identification of high-density low-cost population clusters, as well as other areas with low population density and higher costs.

From the density zone/cost relationships shown on Chart 3, it is evident that at approximately 100 households per square mile the density/cost curve begins its dramatic upward ascent. Thus, by measuring the proportion of lines that are in the lowest two density zones – 0 to 5 and 5 to 100 households per square mile – it is possible to develop a measure of the relative high-cost nature or "ruralness" of a particular area.

The data in Chart 5 provides an illustration of the capabilities of this data base using a five state sample, and looking at density and cost at the wire center level. (While this particular sort was done at the wire center level, it is possible to develop similar data at the study area level or any other level of aggregation.) This table shows the number of wire centers having more than a given percentage of their lines in the two highest cost density zones. The Table shows this relationship separately for rural and non-rural study areas. This data clearly shows the differences between rural and non-rural study areas, as well as the diversity that exists within the universe of rural study areas.

From the left-hand side of Chart 5 it can be seen that 6.1% of rural wire centers in this sample area have more than 75% of their lines in the 0 to 5 households per square mile density zone. There are 12,993 households in these rural wire centers, with an average cost per line of $198.09. In contrast, only 0.2% of non-rural wire centers have over 75% of lines in the 0 to 5 density zone. Almost one third (32.9%) of rural wire centers have more than 25% of their lines in the 0 to 5 density zone vs. 3.5% of non-rural wire centers.

Wire Center Density/Cost Summary

5 State Sample (CO, NM, NY, OR, TX)

Population Density < 5 Households (HH) per Square Mile

Percentage of Lines < 5 HH/mi^2	% Wire Centers	Number of WCs	% HHs	Number of HHs	Average Cost/Line
Rural Carriers					
75% or more	**6.1%**	83	**0.7%**	12,993	$198.09
50%	**16.9%**	230	**2.7%**	53,682	$163.16
25%	**32.9%**	447	**7.2%**	168,362	$127.27
0%	**100.0%**	1,359	**100.0%**	1,988,593	$52.54
Non-Rural Carriers					
75% or more	**0.2%**	4	**0.0%**	191	$153.04
50%	**0.8%**	16	**0.0%**	6,025	$128.42
25%	**3.5%**	67	**0.1%**	47,510	$81.41
0%	**100.0%**	1,906	**100.0%**	35,990,186	$23.61

Population Density < 100 Households (HH) per Square Mile

Percentage of Lines < 100 HH/mi2	% Wire Centers	Number of WCs	% HHs	Number of HHs	Average Cost/Line
Rural Carriers					
75% or more	**31.8%**	432	**11.9%**	237,297	$106.45
50%	**59.7%**	812	**32.2%**	640,641	$79.23
25%	**84.5%**	1,149	**62.1%**	1,235,352	$63.95
0%	**100.0%**	1,359	**100.0%**	1,988,593	$52.54
Non-Rural Carriers					
75% or more	**5.6%**	106	**0.3%**	113,729	$70.67
50%	**20.0%**	382	**1.8%**	648,383	$52.32
25%	**41.3%**	788	**6.0%**	2,160,384	$42.62
0%	**100.0%**	1,906	**100.0%**	35,990,186	$23.61

Chart 5

The right-hand side of Chart 5 provides similar data for line density that is less than 100 households per square mile (both the 0 to 5 and 5 to 100 density zones). Here it can be seen that almost one third (31.8%) of rural wire centers have 75% of their lines in the lowest two density zones vs.5.6% for non-rural wire centers. Most rural wire centers (84.5%) have at least 25% of their lines in zones with less than 100 households per square mile, while less than half (41.3%) of non-rural wire centers have at least 25% of their lines in these zones.

Putting it all Together

In any other situation where a private entity sought tens, if not hundreds, of millions of dollars of scarce public funds, the burden of proving that such a grant would be in the public interest would fall squarely on their shoulders. In the case of portability of universal service support, however, the burden appears to fall to the ILEC to prove that such a grant is not in the public interest. As discussed earlier, the benefits advanced in support of portability are often generalized observations regarding the positive effects of competition. To the extent that an acknowledgement is made that there are public costs associated with portability, these are dismissed as not having been proven or substantiated.

One approach to this problem would be to set out an approximation of the costs associated with the CETC portability, and challenge the party seeking access to high-cost funding to demonstrate that the public benefits exceeded this level. This white paper has identified two primary costs associated with portability – increased fund size and decreased network economies. Approximations of both of these costs can be developed, as discussed earlier. These costs would, of course, be dependent on the density distribution of customers in the serving area, the area in which the new CETC seeks to market its services, and whether funding is sought for existing customers within this serving area.

Benefits will be dependent on a number of factors, particularly what new areas that are currently un-served will receive service, and what new services, pricing plans and options will be offered. If no new areas will be served, and no new services will be provided, then it would appear that such a grant of CETC status would fail the pubic interest test. The job of the policy maker thus becomes one of determining if there is a proper balance of benefits to costs to conclude that a CETC grant is in the public interest.

As demonstrated on Chart 4, in areas of low customer density there is a finite and undeniable network efficiency loss caused by the introduction of a second ETC. In some subset of rural America, it is possible to demonstrate that the costs associated with the designation of a second ETC can never be overcome by public gains from having multiple competing providers. In such "extreme cost" areas the public interest would be best served by one ETC functioning as Carrier of Last Resort.

Other Policy Issues

The Primary Line Issue

As discussed more fully in the ***Train Wreck*** white paper, the issue of limiting support to one "primary line" for each customer raises a number of difficult public policy issues, and calls into question the meaning and sustainability of the Carrier of Last Resort (COLR) concept that lies at the heart of universal service. In addition to the difficulties of determining which line is the "primary" line, there are other issues involving the obligations and regulation of the incumbent including:

- If only one primary line in a high-cost area can receive support, is the provision of additional lines to a given customer location deregulated?
- If a customer were to select a carrier other than the ILEC as its "primary carrier", what would be the remaining obligations of the ILEC for that customer?
- If the ILEC still provided a line to the customer (without support), would the provision of that line be deregulated?
- Would the ILEC be obligated to provide an unsupported line?
- Would the ILEC be obligated to reconnect the customer if they became dissatisfied with the initial "primary carrier"?
- Does the concept of COLR have any meaning in a multi-primary carrier environment?
- Can the ILEC still be required to assume COLR obligation for the extreme-cost customers as the low-cost customers are gradually picked off?

Level of Support

Under current FCC rules, a CETC is eligible to receive the same level of support as the incumbent. Since the ILEC's support is based upon its embedded cost, this means that all CETCs, regardless of the technology that they employ, will receive support based upon the cost structure of the wireline incumbent. This can cause serious problems, since other technologies (particularly wireless) have markedly different cost structures, and wireline carriers experience costs that other carriers might not (e.g., presubscribed interexchange carrier, unlimited local usage, minimum bandwidth requirements, state regulatory costs, etc.). Section 254(e) of the 1996 Act states that the support that a carrier receives must be "sufficient", and that it be used only for the provision of supported services. To the extent that a CETC is provided with excessive support it not only needlessly drives up the level of the fund, but it also violates the specific provisions of the Act.

Disaggregation of Support

Recognizing that costs of serving individual customers vary widely within a study area, the RTF proposed, and the FCC approved, plans to allow ILECs to disaggregate support into two or more support zones. This would prevent a competitor from serving low-cost customers and receiving support based on study area averages. Carriers were required to elect one of three filing "Paths" – including a "self-certification" Path 3 – by May 15, 2002. After this date, carriers are limited only to the more cumbersome Path 2. Unfortunately, due in large part to the uncertainties created by the level and treatment of support to wireless carriers, many of the highest cost companies who would benefit most from disaggregation, were forced to choose the no-disaggregation Path 1 option. If, and when, a more rational and balanced plan for the determination of support portability is determined, carriers should be given an additional opportunity to make a Path 3 self-certification filing, if they so choose. Of course, if it is determined that in some subset of extreme-cost areas portability would not be in the public interest, then disaggregation will become a moot issues in these areas.

The Proxy Model Issue

In his separate statement to the FCC's Rural Universal Service Order issued in response to the RTF Recommendation, Chairman Michael Powell said the following:

> As the Order emphasizes, this is an interim five-year plan, reflecting the fact that we have more work to do in this area. Specifically, I believe it is important that we develop a permanent support mechanism, based on forward-looking costs, or another appropriate measure of costs, by which we can ensure that the rural high-cost loop fund grows no larger than is truly necessary to accomplish its purpose.[8]

The proxy model adopted by the FCC for use in determining support for non-rural carriers assumes a hyper-efficient network constructed by a single carrier in one instantaneous build-out. A proxy model is not, and never can be, precise enough at the individual rural wire center or study area level to serve as the basis for determining sufficient levels of support for rural carriers. Nonetheless, it is ironic that the Commission would in the case of proxy models insist on hyper-efficiency, yet in the case of USF portability, it promotes plans that result in hyper-inefficiency.

Conclusion

For much of the previous century, the telephone network was considered to be a natural monopoly. Natural monopolies are generally defined as situations where the firm experiences decreasing unit costs over the entire extent of the market.[9] Beginning in the 1970s, motivated in part by promising advances in telecommunications technology, policy makers began to question whether this was still the proper model, and gradually began introducing competition. Competition was first introduced in customer premise equipment, then expanded into long haul transmission and long distance services. In each of these cases the competitive dynamics of multiple suppliers and technologies led to wider choice, lower cost, and advancing services for consumers. Clearly in these markets the benefits of competition far outweighed any loss of scale economy that may have existed.

The Telecommunications Act of 1996 completed this process by extending competition into the local distribution, or "last mile" market. The jury is still out on the success of this experiment. Competitors have emerged in some segments of the local market, but not in others. It is not the purpose of this paper to debate the issue of local competition – Congress has spoken and provided guidelines for its implementation. What we do want to focus on, however, is how the specific guidelines that have been provided for the designation of multiple ETCs should be implemented. In this context it is clear that Congress anticipated that there were some rural markets where portability should not occur.

If Congress had intended for CETCs to be approved in all rural areas, then they would have said so, as they did for non-rural areas. By stating that the Commission may designate more than one ETC if they can determine that such designation was in the public interest, they must have anticipated that there would be circumstances where it was not. In "extreme cost" rural areas the nature of the density/cost relationship is such that the introduction of a new competitor causes an increase in cost for all providers that greatly exceeds any benefits from having multiple suppliers. This is the phenomenon that Commissioner Martin was commenting on in the statement contained at the beginning of this paper. It is also noteworthy that several recent court decisions have taken a negative view of efforts to create "artificial competition".[10]

It is entirely possible that the local telephone marketplace is not a single homogenous market, and that some subset of the high-cost rural market might indeed be considered to be a natural monopoly, best served by a single ETC. This is not to say that there is not a role for competition in the evolution of this marketplace. As stated in the ***Train Wreck*** white paper, it may be possible to allow carriers to compete for the ability to become the single Carrier of Last Resort, and sole recipient of universal service funding.

The analytical framework and tools presented in this paper can provide an objective means for state commissions and the FCC to evaluate specific requests for CETC designation, and to insure that the public interest is preserved. Only by carefully assessing the costs and benefits of portability can policy makers assure that scarce public funds are used efficiently, and that the overall level of the fund can be maintained at sustainable levels. Universal service is a vital American resource. It is critical that we get it right.

[8] 14h Report & Order and 22nd Order on Reconsideration, and FNPRM in CC Docket No. 96-45 and Order in CC Docket No. 00-256, released May 23, 2001, ***Separate Statement of Michael K. Powell.***

[9] Alfred E. Kahn, The Economics of Regulation – Principles and Institutions, Page 119 / II.

[10] In USTA v. FCC the Court of Appeals for the D.C. Circuit comments that the Commission needs to look at differentiated markets, and that "synthetic competition" is not what Congress had in mind. In Verizon v. FCC, Justice Breyer (concurring in part and dissenting in part) states that the Statute supports competition "in so far as local markets can support that competition without serious waste".